

ABSTRACT

A thermal processing system (1) includes a reaction vessel (2) capable of forming a silicon nitride film on semiconductor wafers (10) through interaction between
5 hexachlorodisilane and ammonia, and an exhaust pipe (16) connected to the reaction vessel (2). The reaction vessel 2 is heated at a temperature in the range of 500 to 900 °C and the exhaust pipe (16) is heated at 100 °C before
10 disassembling and cleaning the exhaust pipe 16. Ammonia is supplied through a process gas supply pipe (13) into the reaction vessel (2), and the ammonia is discharged from the reaction vessel (2) into the exhaust pipe (16).

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